

Work Order ID 72921

Thursday, August 18, 2011 10:06:51 AM

Page 1

Item ID: D3196-1

Accept

Setup Start

Revision ID:

Stop

Item Name: Bar

Start Date: 8/18/2011 Start Qty: 4.00

Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan:

Date: 11-08-18

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3196

Rev C

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blank: (0.75" x 1.50") x 26.200" long Bar

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3196-1 as per Folio FA339 and Dwg D3196 Identify as D3196-11-2-
Deburr

SL 11-09-02

(4)

120

0.00



QC2- Inspect parts off machine FAI/FAIB -

QC

Memo

0.00

Quality Control

SL 11-09-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72921

Thursday, August 18, 2011 10:06:51 AM



Page 2

Item ID: D3196-1

Accept



Setup Start



Revision ID:

Item Name: Bar

Stop



Start Date: 8/18/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

cancel 11/09/02

4 0

QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

4 X 0 m-11/09/06

HandFinish

Memo

0.00

Hand Finishing

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

Powdercoat

Memo

0.00

Powder Coating

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

12:50

3200F

1:20

4 X 0 m-11/09/07

M 117338

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72921

Thursday, August 18, 2011 10:06:51 AM



Page 3

Item ID: D3196-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bar

Start Date: 8/18/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

4 6 11/09/07

170

Identify as per dwg & Stock Location *SI 200*

0.00



Packaging

Memo

0.00

Packaging

4X 11-09-07

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/9/8 *MF*
11-09-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, August 18, 2011 10:06:57 AM

Page 1

Work Order ID: 72921

Parent Item: D3196-1

Parent Item Name: Bar



Start Date: 8/18/2011

Required Date: 8/25/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev: A New Issue 05-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.750X01.50 0		Purchased	No			100	f	63.5746	2.183	9.191579			



6061-T6 Bar .750 X 1.50



Location

Loc Qty

Loc Code

MAT003

63.5746

116405

0.4492

116604

1.5

116623

1.6254

→ 118182

60

9.2 on 11/08/31

W/O: <input type="checkbox"/>		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	72921
Description: Bar		Part Number:	D3196-1
Inspection Dwg: D3196	Rev: C	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype





Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
26.094	+/-0.010	26.094	/		m-tape	
4.045	+/-0.010	4.045	/		vern JL-3	
18.003	+/-0.005	18.003	/		m-tape	
0.750	+/-0.005	.750	/		vern JL-3	
1.500	+/-0.010	1.502	/		"	
Ø0.344	+0.006/-0.001	.343	/		"	
Ø0.660 x 100°	+0.008/-0.001 x 0.5°	.665x100°	/		"	
0.060 x 45°	+/-0.010 x 0.5°	.063x45°	/		"	
0.750	+/-0.010	.752	/		"	
0.250	+/-0.010	.251	/		"	
3.495	+/-0.010	3.490	/		"	
9.000	+/-0.010	9.000	/		vern CNC-02	
16.844	+/-0.010	16.844	/		m-tape	
21.498	+/-0.010	21.498	/		"	
R0.125	+/-0.010	.125	/		R-G	
1.1 00	+/-0.010	1.100	/		vern JL-3	
R0.125	+/-0.010	.125	/		R-G	
0.444	+/-0.010	.441	/		vern JL-3	

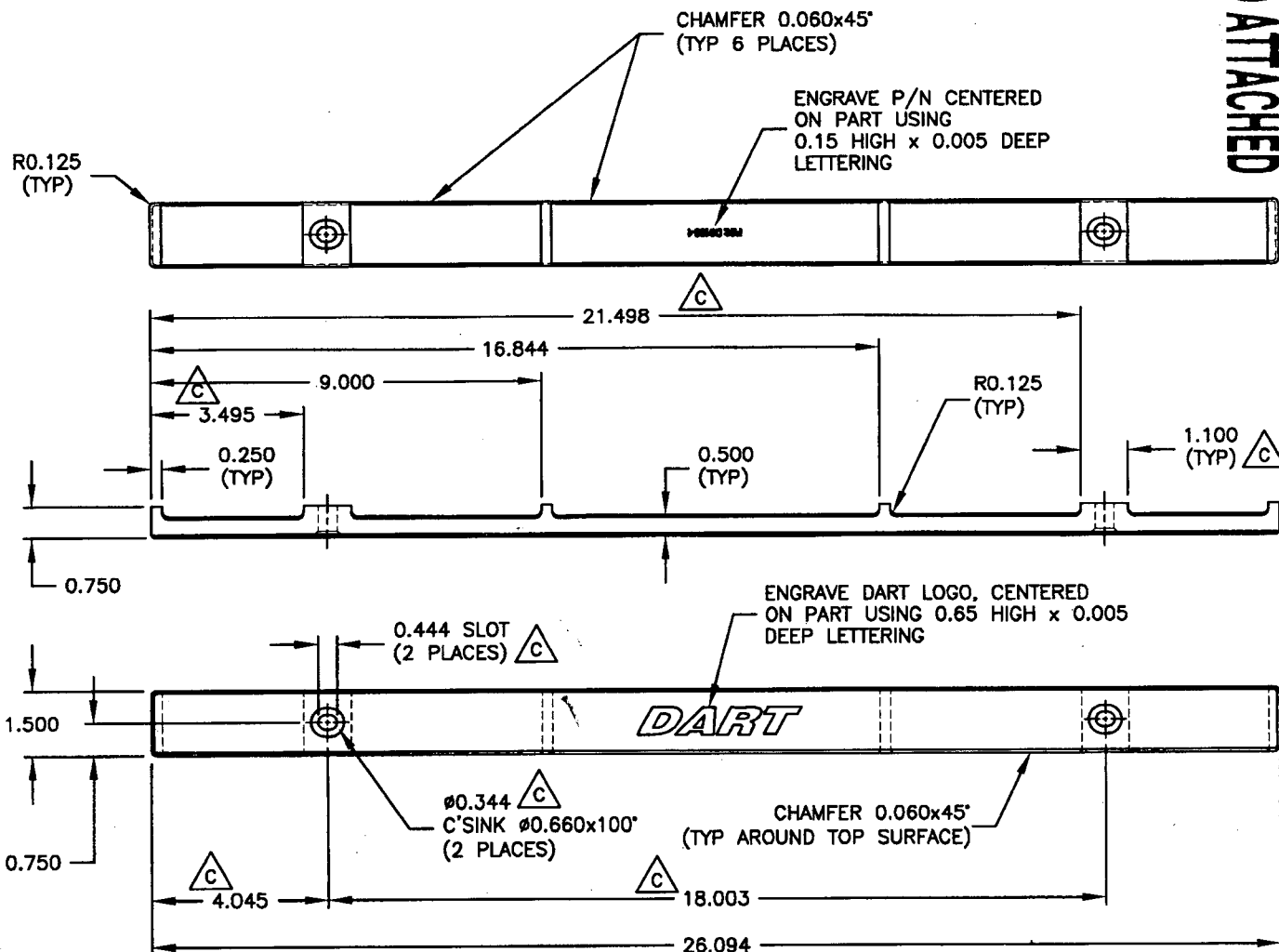
Measured by:	SL	Audited by:	mf	Prototype Approval:	N/A
Date:	11-09-02	Date:	11/09/02	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue	KJ/RF	
B	06.10.24	Dwg Rev. updated	KJ/JLM	
C	07.03.21	Dimensions updated per Dwg rev. C	KJ/JLM	EF

THE
LAW
SOCIETY

DEO ATTACHED

DESIGN		DRAWN BY		DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA		REV. C
CHECKED		APPROVED		DRAWING NO.	D3196	SHEET 1 OF 3
DATE	06.10.31			TITLE	BAR	SCALE 1:4
A	03.06.25			NEW ISSUE		
B	06.09.25			ADD D3196-5		
C	06.10.31			ADD SLOTS ON -1; REMOVED -5		



D3196-1 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO:
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 12721

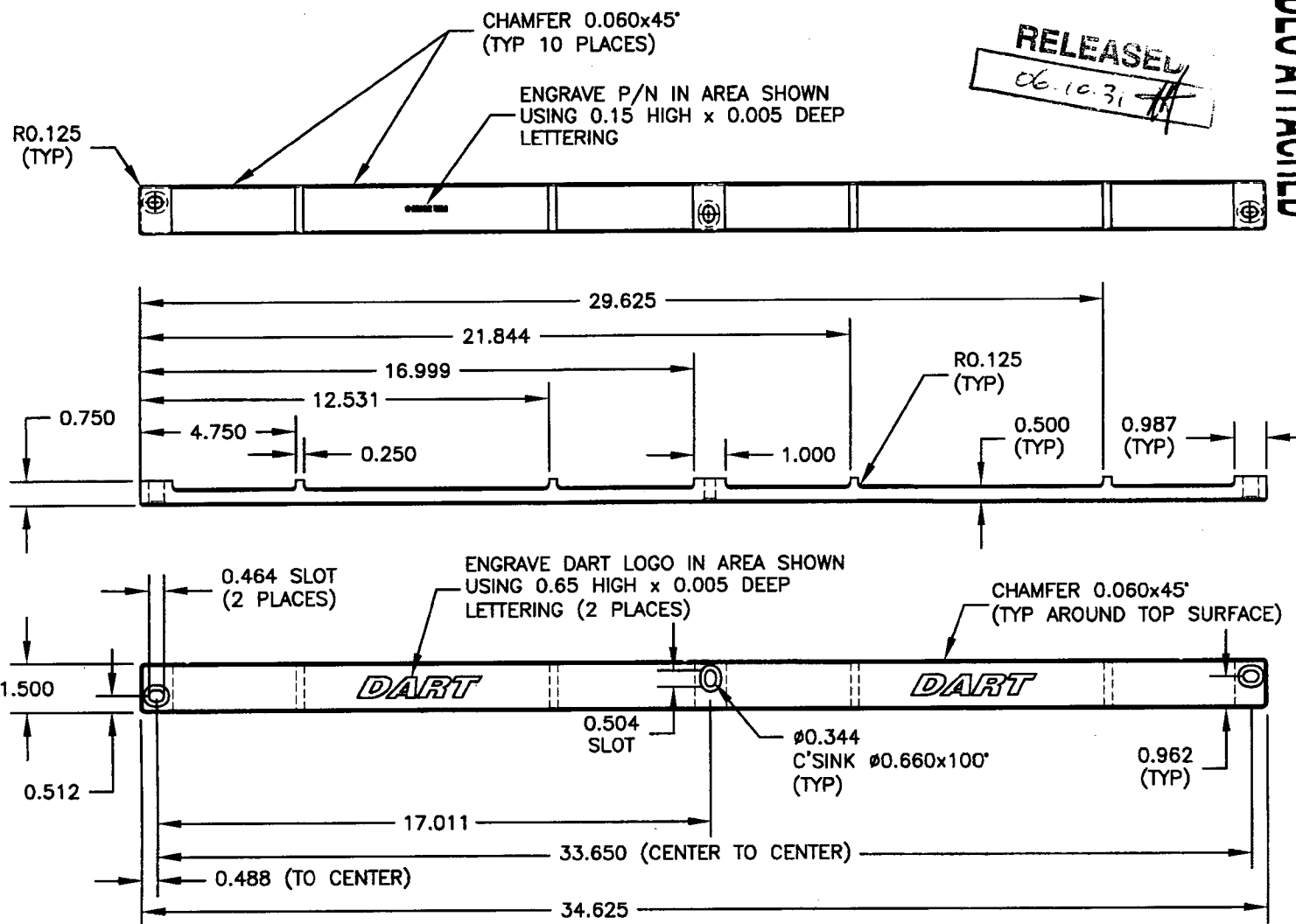
Copyright © 2003 by DART AEROSPACE LTD

Copyright © 2003 by DART AEROSPACE LTD

DART

DETACHED

RELEASED
06-10-31



D3196-3 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

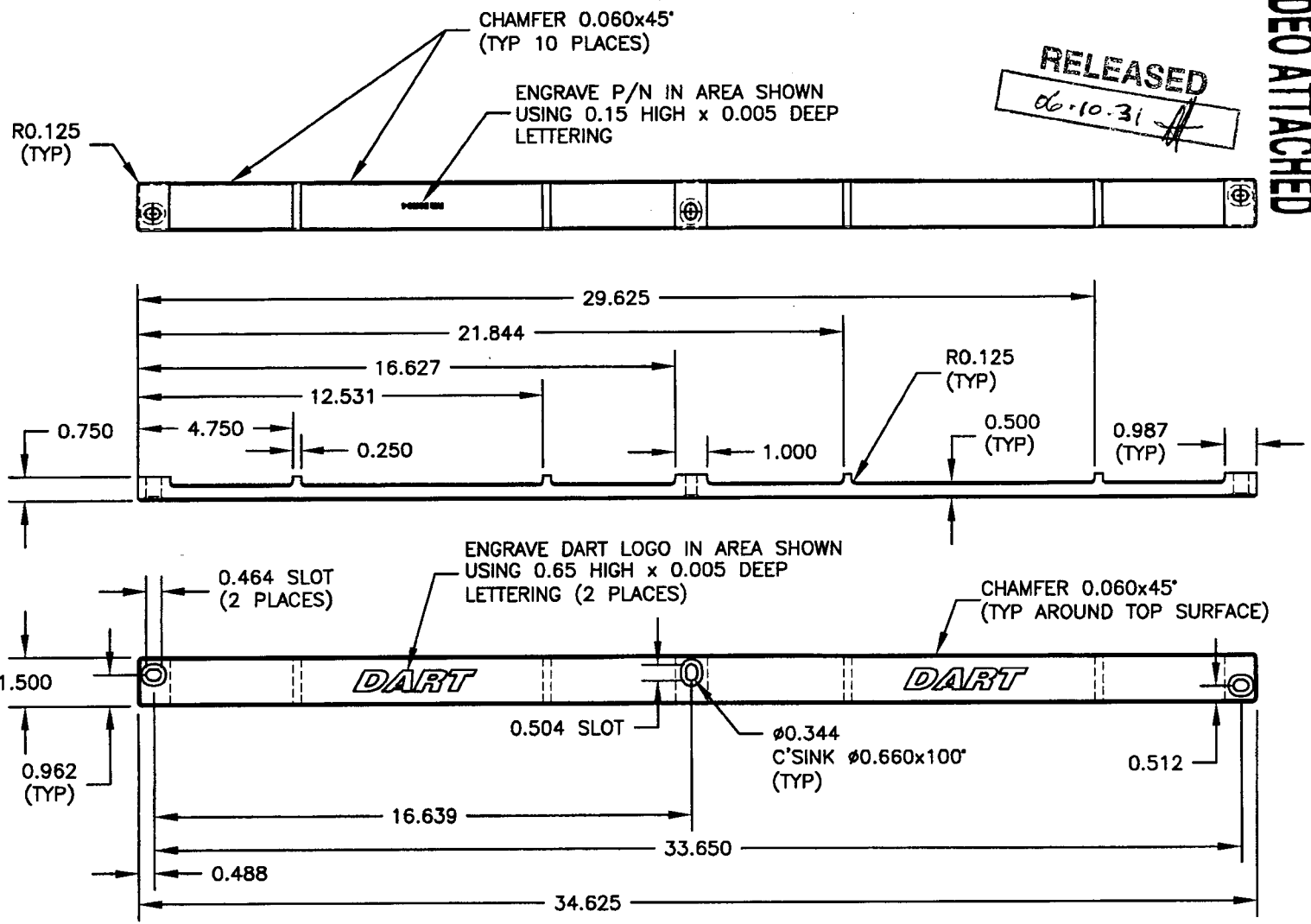
72921

DESIGN	QC	DRAWN BY	JR	DART AEROSPACE LTD
CHECKED	PH	APPROVED	PH	HAWKESBURY, ONTARIO, CANADA
DATE	06.10.31	DRAWING NO.	D3196	REV. C
TITLE	BAR	SHEET	2 OF 3	SCALE
				1:5



DEO ATTACHED

RELEASED
06.10.31



D3196-4 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

72921

DESIGN	Q0	DRAWN BY	JR	DART AEROSPACE LTD
CHECKED	PH	APPROVED	JR	HAWKESBURY, ONTARIO, CANADA
DATE	06.10.31	DRAWING NO.	D3196	REV. C
TITLE	BAR	SHEET	3 OF 3	SCALE
				1:5

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Copyright © 2003 by DART AEROSPACE LTD

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04	

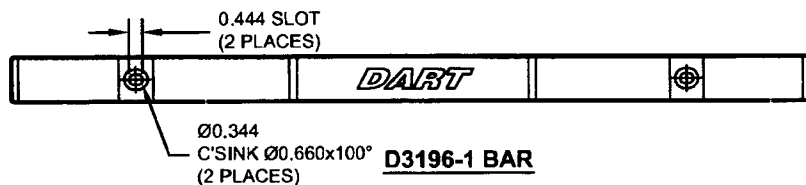
SHEET 1 MODIFY SLOT DIMENSIONING ON D3196-1 AS SHOWN:

IS:



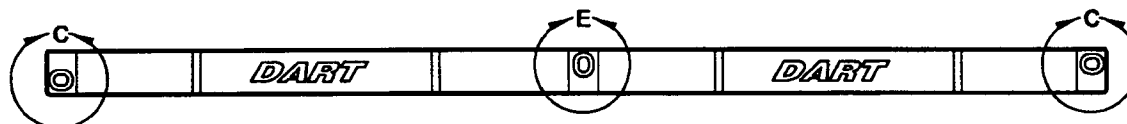
D3196-1 BAR

WAS:



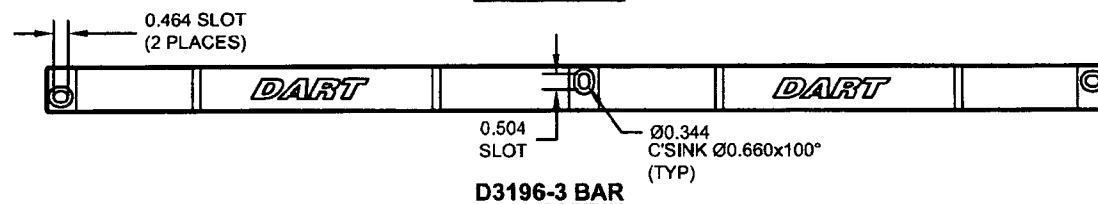
SHEET 2 MODIFY SLOT DIMENSIONING ON D3196-3 AS SHOWN:

IS:



D3196-3 BAR

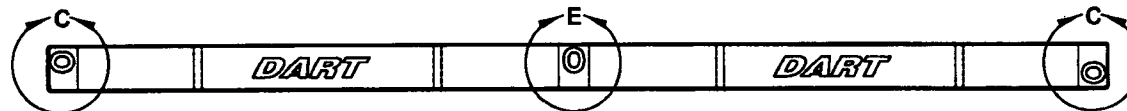
WAS:



72921

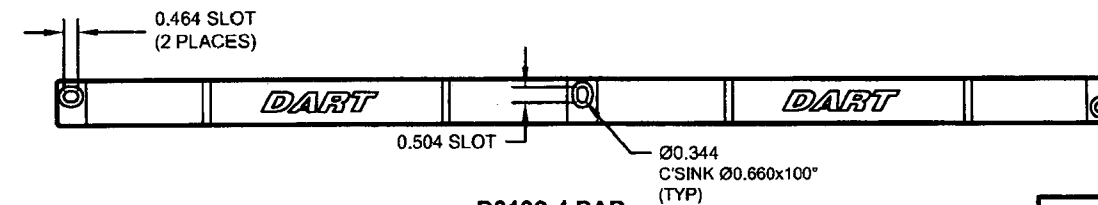
SHEET 3 MODIFY SLOT DIMENSIONING ON D3196-4 AS SHOWN:

IS:



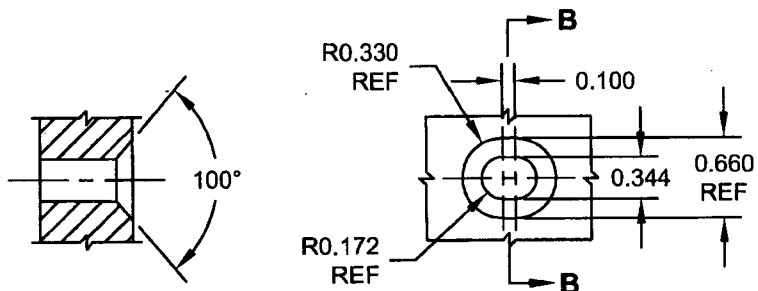
D3196-4 BAR

WAS:



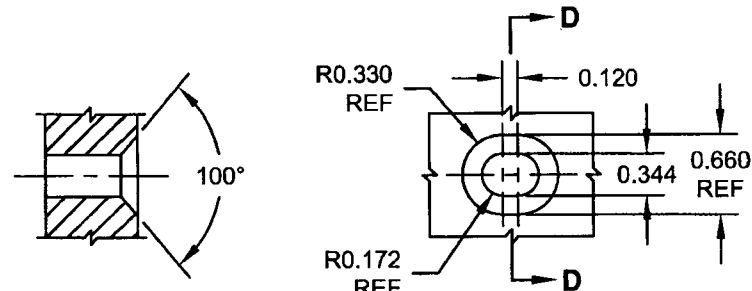
D3196-4 BAR

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04	



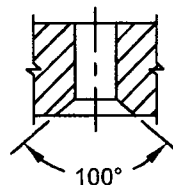
SECTION B-B

DETAIL A

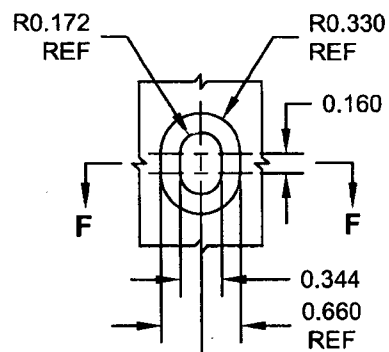


SECTION D-D

DETAIL C



SECTION F-F



DETAIL E

72921

NOTE: THIS CHANGE HAS BEEN DONE TO CLARIFY SLOT DIMENSIONS ONLY. NO CHANGES HAVE BEEN MADE TO THE PARTS
SEE NCR 08-051 FOR FURTHER INFORMATION
ALL OTHER INFORMATION REMAINS UNCHANGED

COPYRIGHT © 2003 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.